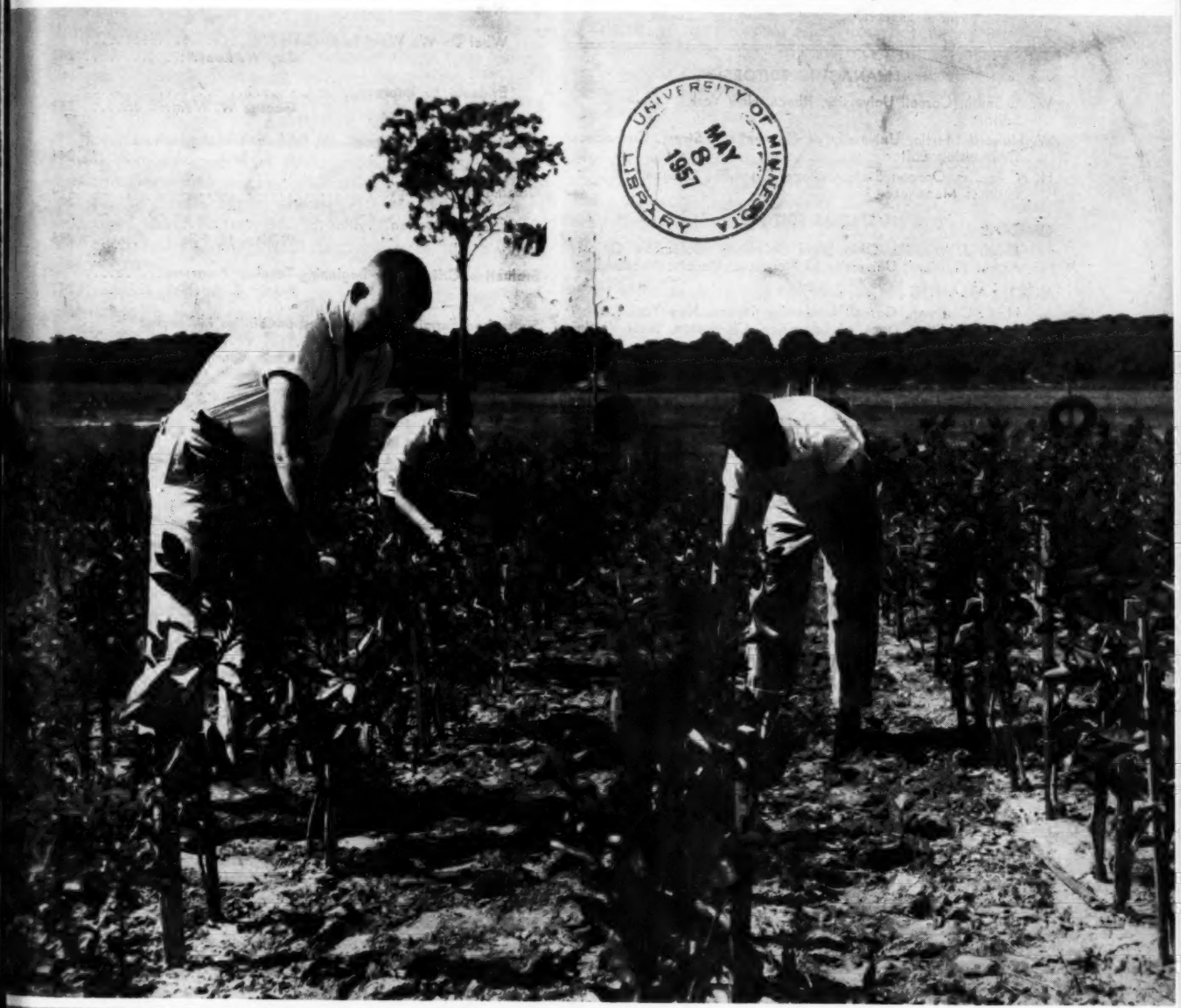
The AGRICULTURAL EDUCATION Magazine

VOLUME 29 MAY, 1957 NUMBER 11



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Featuring— **Evaluating the Vo-Ag Program**

The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

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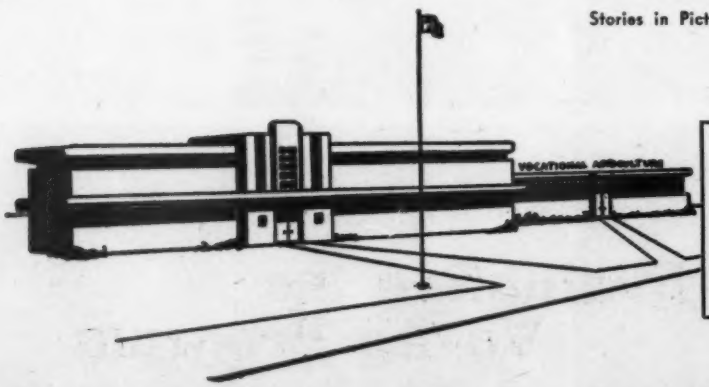

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Entered as second-class matter under Act of Congress March 3, 1879, at the post office in Danville, Illinois.

Editorials

What do we want to evaluate?

ROY W. ROBERTS, Teacher Education,
University of Arkansas.

Evaluation is a relatively new term in educational literature, but the practice of attempting to determine how much a pupil learns and how well a teacher teaches has prevailed since schools were first established. Through the years, teachers have been referred to as "good" teachers and schools as "good" schools largely by means of subjective estimates made by various individual citizens of the local community. Pupil performance was first measured by subjective examinations and teacher estimates. The development of standard tests began about 1910, and test batteries appeared shortly after World War I. Broad programs designed to evaluate school systems have taken form since 1940.

Evaluation in vocational agriculture was first concerned with pupil performance, and some effort was made in the 1920's to develop standard tests for this purpose. This met with little success due to the wide variation in subject matter content among departments of vocational agriculture. Score cards appeared about this time—the first of which were concerned largely with rating physical facilities, teacher qualifications, and pupil records. Departments that scored high on such factors as extent and arrangement of shop and laboratory equipment, qualifications of the teacher, pupil records and reference material were judged to be superior departments, and likewise, teachers in these departments were rated as superior teachers.

The idea of using pupil activity as a supplement to or as a substitute for the above factors was advanced in the 1930's. Rating scales contained such questions as "Do pupils use the best practice relative to land preparation?" and "Do pupils keep the farm animals in good condition and appearance?" The pupil activity idea doubtless came about as a result of the recognition about this time of the importance of some of the less tangible areas of human characteristics and accomplishments. The limitations of these various factors and devices have led workers in vocational agriculture to develop the more comprehensive evaluation programs of the present day.

The foregoing discussion suggests that evaluation in vocational agriculture is not a simple matter of giving a pupil a test, but a rather comprehensive undertaking involving the results or outcomes of instruction, as well as the qualifications of teachers and the techniques of teaching. It also suggests that all the activities in which the teacher engages, including day school teaching, FFA programs, young and adult farmer instruction, supervised farming programs, community activities and community progress, should be included in the evaluation program. This means that many people and many devices may be used in a program of evaluation. When an undertaking requires the services and use of many people and many devices, some plan is needed to insure reliability and prevent confusion. Consequently, the first step in the development of an

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Evaluate to improve

GEORGE W. WIEGERS, JR., Teacher Education,
University of Tennessee.

Effective evaluation is one of the most important processes in agricultural education, because, without it, our instructional program may contribute less and less to behavior changes hoped for in learners. When one is on a wrong road, the sooner he corrects his error, the better off he will be.

Evaluation may be defined as "the process by which one chooses among values or places a value upon something." In short, it is a value inquiry. To determine the value of something involves the weighing of values, many of which are subjective in nature. This weighing of values involves comparing something with a standard, objective, ideal or another unit of similar material.

A value inquiry has to do with all parts of what an educator is doing, has done or will do. Therefore evaluation should be continous because it can help interpret the past and present and give direction to what one is doing and/or plans to do.

The brief discussion of purposes of evaluation which follows is limited to a small facet of the total area in which evaluation functions.

1. *To help determine educational needs.*

Determining many agricultural education needs involves assessing situations to find out what abilities are needed for success and the abilities already possessed by learners. If one has a standard, objective or ideal in mind and then weighs the present situation against it, the evaluation process may point out abilities which need to be developed or further developed. An outcome of this value inquiry should be a basis for setting up rather specific teaching and learning objectives.

2. *To help clarify teaching and learning objectives.*

Even though the needs of learners have been determined through systematic processes, selected ones must be translated into teaching and learning objectives. There are always far more needs to be met than can be fulfilled through organized instruction. It follows that choices have to be made among values in deciding what learnings should be sought and therefore what teaching is to be attempted. Subsequent appraisals necessitate clear definitions of the results hoped for. These definitions serve to give direction to both instructor and students in the selection of appropriate learning experiences or activities.

3. *To help select learning experiences or activities.*

The selection of learning activities which will enable students to secure the more important learnings requires many value judgments. Some student activities may accelerate learning while others may actually deter learning. Progress may be made toward reaching some objectives by using a problem solving procedure, but there may be more appropriate ways of reaching other objectives. Students engaging in activities may

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An appraisal of present status and future outlook.

Planning ahead for vocational education in agriculture*

R. E. BASS, Supervisor, Virginia.

R. E. Bass

THERE is a story of a farm boy who learned to plow at an early age. From that time and until he finished high school he would say to the old horse, when they came to the end of each row, "Whoa, Becky! Haw! Git up!"

Then this young man went off to college and when he returned he still faithfully "plowed" old Becky. But when they reached the end of the row he would say, "Halt, Rebecca! Pivot and proceed."

Perhaps vocational education in agriculture should halt occasionally, pivot—look around, and then proceed. Significant to Vocational Agriculture, we would see that:

1. Percentage-wise the number of farmers is decreasing.
2. The size of farms is going up.
3. Farm prices are not expected to go up and may go down.
4. Farm operating cost will go up.
5. Politics-wise, the farmers' influence is going down.
6. Farm policy-wise, the farmers' influence is going up.
7. Fewer farm boys will stay on the farm.
8. Farms will become more mechanized.
9. Production will increase.
10. Farmers will find new sources of income from the land.
11. Marketing practices will improve.
12. Farm management will be the key to success—or failure—in farming.

This all points to the need, in the future, for better trained farmers. For us in vocational agriculture it presents a real challenge. It means that we must increase our emphasis on, and the effectiveness of, programs of real educational value for young and adult farmers. At the same time we must improve the quality of our instruction for in-school boys. The surry with the fringe on top has gone on stage and Rebecca—the horse that pulled it and the plow—is passing from the American scene. In their places are vastly more complicated mechanized wonders that do the same job better in less time. "Horse and buggy" teaching methods and practices in the future will not long survive the critical eye of farmers striving for profit from their hard work; of school administrators seeking results from teaching; of legislators looking for money to meet increased demands upon local, state and national treasuries. Some day the American farmer is going to hold accountable, for his success or his failure, one or more tax-supported agencies created to help him.

We should be thankful for the fates that have shaped our destiny and for our professional organizations in vocational agriculture—our National Vocational Agricultural Teachers Association; our Regional Conferences, our American Vocational Association. They provide for us the opportunity for unity of effort; of research and study; of policy and planning; of exchange of ideas; fellowship and understanding; spirit and direction.

Our Guide-Posts

In planning ahead for vocational education in agriculture we should, in my opinion, consider the following:

1. Vocational Agriculture is a part of the public school system. AVA has, and will, continue this philosophy. Only those who do not believe in public education would have it any other way. Through AVA we can promote this philosophy. And we must continue to direct our instruction toward increasing the proficiency of present and prospective farmers. To branch off into teaching related occupations—whatever they are—is to divide our efforts between what we were created to do, and something else, and weaken the entire foundation and structure of vocational education in agriculture.

2. In the future we may expect the school and the teacher of vocational agriculture to become more and more conscious of their responsibility to:

a. Provide more guidance and counseling to the end that only those students who have the interest in and the opportunity to engage in farming constitute the large majority of students enrolled in vocational agriculture high school classes.

b. Give greater emphasis to individual on-farm instruction for in-school and out-of-school students even at the expense of time devoted to formal classroom instruction for in-school students.

c. Place more and more emphasis on organized systematic instruction for out-of-school individuals engaged in farming.

d. Provide instruction to meet the agricultural needs of the prospective part-time farmer.

3. We (NVATA and AVA) must continue our efforts to improve salaries of teachers—not by pressure, influence or intimidation, but by demonstrating conclusively the values in vocational education in agriculture.

4. I agree with those who believe we should develop and recommend to school administrators a plan or system for basing salary increases of vocational agriculture teachers on merit and accomplishment. It is my belief that many school administrators will eventually come to this point of view. A salary schedule that gives every man the same increase irrespective of his accomplishments never has made sense to me. In my opinion such a system penalizes superior achievement, rewards inefficiency and promotes mediocrity.

5. NVATA members are in the best possible position to recruit teachers. Fewer men are entering the teaching profession. Instructors of Vo-Ag would do well to encourage more and more good farm boys to train for and enter teaching through vocational agriculture and to qualify for promotion from teaching Vo-Ag to administrative jobs in education.

6. Conduct of FFA boys at the National Convention does not reflect the best of credit upon vocational agriculture. Instructors, supervisors and teacher trainers have a responsibility to solve this problem. It is my belief that teachers of Vo-Ag can do it and I hope NVATA will include this in their program of work.

7. It seems to me that NVATA, also, might initiate some form of outstanding service award to recognize superior contributions of teachers for exceptional instructional programs in agriculture.

8. Our "hat is off" to the AVA Research Committee in Agricultural Education, as well as to other committees, for the service they are giving. Many committee members and others have worked long and hard. We are indebted to all of them. Research is mentioned because of the importance of research to Vocational Agriculture and because our AVA Research Committee is providing the leadership in a National Young Farmer study of tremendous importance to the future of Vocational Agriculture. Somehow we must devise ways and means of making more use of research studies. For this I think we will have to lean heavily on teacher trainers. Certainly there are too many studies gathering dust on library shelves.

9. At the last session of congress there was introduced by Senator Lister Hill, of Alabama, and co-sponsored by 25 other senators, a bill—S 4301— to encourage states "to establish area vocational schools and programs for the training and retraining of technicians and skilled workers in industry and agriculture and for training in other occupations essential to the national security and economy." I hope that you have a copy of the bill and have studied it carefully; you may have read about it in detail in the October, 1956, AVA Journal. Your AVA is responsible for initiating this measure and will continue to promote it. Your suggestions for improving it will be helpful. The bill was prepared by representatives from all fields of vocational education, and in cooperation with members of the Congress who provided valuable advice and assistance. The bill, if passed, will authorize the appropriation of funds that

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* From the address by Mr. Bass before the Agricultural Education Section of the AVA at St. Louis last December. Mr. Bass is AVA Vice-President representing Agriculture. Editor.

will be particularly helpful to vocational agriculture. It will enable us to do a lot of things that we do not now have money to do. It will be a significant help in providing additional teachers for young and adult farmer training programs and for special teachers in such fields as livestock improvement, crop production, forestry, farm mechanics and the like.

10. Looking ahead, I doubt if we should expect much increase in in-school enrollment in Vocational Agriculture. Although enrollment in high schools will increase it is likely that expanded offerings in the high school curriculum and the shift in workers from farming to other jobs will attract more farm boys away from agriculture. Enrollment in young and adult farmer classes, however, will, or at least should, increase. Hours of instruction will increase. There will be a definite need for more on-farm instruction. Young and adult farmers will need, will demand and will get, more educational services than ever before.

11. Teachers of Vocational Agriculture will have to be better trained to fill the needs of tomorrow's agriculture. They must be skilled in technical agriculture. Unless the period for teacher training in agricultural education is lengthened it may mean lessening the time devoted to professional subjects in order to increase the training in technical agriculture, because we can no more teach what we don't know than we can come back from where we haven't been.

Some Changes Taking Place

These and other things to come will tax our ingenuity in the future. No program of education conceived and formulated nearly 40 years ago can hope to cope with the problems and opportunities of a fast changing world without changing with the times. Look with me for another minute at what's happening: The percentage of the nation's working force engaged in the production of goods (farming, mining, manufacturing, etc.) is going down. The percentage engaged in clerical and distribution fields is going up. The old and young will be proportionately more numerous and the middle-aged less numerous within 10 years. This presents the paradox of more consumers of goods and fewer persons to produce them. Significantly, too, the number of women compared to the number of men is going up. In 1955 the females out-numbered the males by 1.25 million. Agricultural economists estimate that it takes from $25,000 to $35,000 capital investment to establish an economically feasible farming unit.

Some Predictions

Through our professional organizations in vocational agriculture—NVATA, our regional conferences and AVA—we have the opportunity for every person in the work to participate in directing our efforts toward meeting the future needs of farmers. I have great confidence in teachers making significant contributions toward this end. I predict that supervisors and teacher educators will more and more seek the advice and help of teachers in shaping the future of Vocational Agriculture. As an example, each state in the South plans to send at least one teacher this year to the Regional Conference.

I predict also there will be less bickering among us; less criticism of others; less of that attitude some of us have expressed that "Vocational Agriculture has the world by the tail" and can get anything we want.

There will be more good feeling among us, and hard work; more cooperation with others; more interest in NVATA, conferences and AVA; more research, more joint planning by teachers, supervisors and teacher trainers—all of which will mean better supervision, better teacher training and better instruction for farm persons.

In summary we have nothing about which to be unduly alarmed as to the future of Vocational Agriculture in the total program of public education so long as we are willing to be our own most severe critics and concerned not only about the evaluation of others but very vitally concerned about self-evaluation and evaluation of our program.

It's just a question of how are we going to do it. Will we say, "Whoa, Becky, Haw! Git up!" or will it be, "Halt Rebecca, pivot and proceed." □

What Do We Want - - -

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evaluation program is the preparation of a plan showing what will be evaluated, what will be used, and who will be involved.

Educators suggest that a plan for evaluation should be based on the aims and objectives of the program to be evaluated. Major objectives in vocational agriculture have been established and subdivided into abilities. When these established abilities, or their adaptations, are used in a plan of evaluation, it is necessary that desired outcomes or standards be determined for each ability. Appropriate devices, such as tests, rating scales, pupil records, surveys, interviews and evaluative criteria are then selected for measuring the extent to which the activities engaged in by pupils and teachers meet the standards reflected in the desired outcomes.

This process of evaluation is a complicated one and becomes more so when pupils, teachers, advisory committee members and others participate in the evaluation; and when in-school, out-of-school, FFA, supervised farming and community improvement are included in the plan. These complications have discouraged many teachers from undertaking an evaluation and have caused others to limit their evaluation activities. Some progress in simplifying the program has been made in recent years by the use of evaluative criteria prepared by committees of the American Vocational Association. These criteria include factors concerned with ways and means, as well as those involving outcomes. They include subjective estimates, as well as objective measurements, and invite participation by many different individuals.

It should be remembered that pupils, teachers and departments of vocational agriculture are under continuous evaluation, either by haphazard and unreliable methods, or by approved devices and techniques. Accordingly, it is to the interest of the teacher of vocational agriculture and to the welfare of the vocational agriculture department that the best methods and devices be used in a program of evaluation. This requires much time, effort and skill and perhaps some discouraging moments. However, in the end, it will prove eminently worth-while as a means of obtaining valid and reliable measures of school and community efforts to "train present and prospective farmers for proficiency in farming." □

Evaluate to Improve

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make varying degrees of progress toward what they set out to do.

4. *To help determine progress or growth.*

Evaluation of results to determine progress or growth should be done with respect to where one has started. The starting points are the teaching and learning objectives. Continuous appraisals of results are necessary to enable the learners to know wherein they are deficient and wherein they are achieving satisfactorily. This understanding of where they are in relation to their objectives helps motivate learners to further growth. Making value inquiries of the results at the end only, may be too late to remedy the lack of learning.

Value inquiries involving the learners are essential to improvement of learners and their environment. Such inquiries must be made to determine agricultural education needs, to clarify objectives or learnings sought, to select appropriate learning experiences or activities and to determine progress or growth toward objectives. □

Coming Next Month

The final issue of Volume 29 of the *Magazine*, coming in June, will present the program of vocational agriculture in pictures. It is intended that this special pictorial issue will have usefulness to teachers, supervisors, teacher educators and administrators as a public relations instrument wherever and with whomever the meaning and significance of vocational agriculture needs to be told. Insofar as pictures can tell the story, the June issue will serve to supplement other media in explaining to prospective students, their parents, school administrators and board members, cooperating agencies and the general public what vocational agriculture is and how it functions.

Each current subscriber to the *Magazine* will receive his copy of the June issue as usual. Additional copies may be obtained upon order placed in advance or by means of an order form which will accompany the June mailing. Begin to plan now the number of additional copies you can use in your department, school or state.

Bases for evaluation

Objectives of the program and the evidences of their attainment should be identified and examined.

WILLIAM H. PYLE, Principal, North Harford H. S., Pylesville, Md.

AN effective evaluation of any department in a school must be made in the light of the objectives of that department. It is to be expected then, that the school administrator, endeavoring to evaluate the Agricultural Program in his school, will avoid broad generalizations and unproven theory and attempt to find the answers to such specific questions as:

1. What are the objectives of the department?
2. What facilities exist to enable students to obtain the objectives?
3. How effectively are such facilities used?
4. How effectively has the department promoted the vocational interests of students?

At North Harford, the long-range objectives of the Agricultural Program are twofold—(a) to provide adequate academic background for students who desire further formal education and (b) to provide practical experience for students in terminal education. Different as these two objectives may seem to the layman, their inter-relationship is obvious to the supervising principal for he realizes fully that the academic element must be prevalent enough to enable the prospective college student to understand principles, evaluate theory and develop skills in gaining information without sacrificing the practical experiences which will enable the boy who begins to work on a farm the following year to have had help and guidance in the complex problems which face modern farmers.

Needed Provisions

In order to provide a maximum realization of such objectives the adequate Agricultural Program must provide:

a. Adequate text and resource material
b. Visual aids, varied and easily accessible shop facilities
c. A "proving ground" for experimentation in soil, livestock, building and conservation
d. Especially trained personnel
e. Participation in local, state and national contests and projects
f. An opportunity for civic participation
g. Close bonds of community ties

Needless to say, adequate facilities do not guarantee an adequate program; they merely set the stage for it. The true worth of a program lies in the degree to which facilities are used to accomplish the objectives of the program. To determine this degree of use the evaluator might profitably seek answers to such specific questions as:

1. Does the teaching show adequate variation of method and motivation?
   a. Has the teacher used a variety of good, recognizable methods (problem solving, demonstration, student reporting, panel discussion, research, etc.) in his teaching?
   b. Have students been led to consider the subject important and worth studying?
2. Are there evidences of practical application of the learning of the students?
   a. Has the school ground been beautified?
   b. Are conservation practices in evidence on the farm?
   c. Has the shop paid for itself in savings and repairs and in experiences afforded?
   d. Has there been sufficient carry-over to home situations?
3. Is the course a good public relations force?
   a. Has the community been utilized for teaching and learning?
   b. Have students been made sufficiently aware of the value of the course?
   c. Has the community been consulted through Advisory Committees, Young Farmers' Groups and other "tie-in" organizations?
   d. Are community speakers invited to the classroom?
   e. Do student speakers go to community organizations?
   f. Do educational officials visit the school?
   g. What profit is derived from such visits?

Vocational Outcomes

Since the Agricultural Program is primarily vocational, its final evaluation lies in the answer to the question: How effectively does the department promote the vocational interests of the students? Like the horse and buggy, the idea that "you farm if you are not smart enough to do anything else" is gone. Modern Ag courses must produce young men who will be owner-operators or operators of the farms of the nation. They also must adequately prepare young men to go on to college for preparation such as is sought by employers hunting capably trained men for employment in extension services, manufacture of machinery, feed and insecticides and many other related fields of work. It is the task of the Agricultural Program to provide the kind of counseling that will encourage the student to make the most of his vocational opportunity. That, unfortunately, may frequently mean that in this day of high capital investment, the student will be most kindly advised if he is enabled to see that such program is not appropriate for him.

Some Kinds of Evidence

A principal, in evaluating the Agricultural Program in a school, may use both broad generalizations and educational theory. But, for true evaluation one would do better to consider specific activities, projects, classroom teaching, and interests of the department.

Because it is a school, evaluation must include classroom teaching. Upon entering a classroom, its very appearance offers the first evaluation. Does it look clean and orderly and indicate pride on the part of the instructors and pupils? Do bulletin boards show meaningful pictures, records of pupils' projects, lists of prizes won, and other indications of activities and recognition of the individuals' efforts? Are there displays of awards won for projects, demonstrations, and judging teams? Do posters, banners, and other materials indicate participation in groups such as Future Farmers of America?

A closer study of the classroom will provide further evaluation. Textbooks should include those of general information on agriculture, those of a specific nature, and those of hobbies, vocations, and related interests to agriculture. One will find evidence of learning of factual materials enriched by the development of skills in speaking, listening, reading, and writing. The widening of horizons and indirect experiences through audio-visual aids is a vital part of effective classroom learning.

Preparation for Leadership

As an individual cannot live unto himself and find a rewarding life, neither can any department of the school. No better indication of this strength is seen than in a school's affiliation with groups such as the Future Farmers of America. An active Chapter within a school leads to association with county, tri-county, state, and national groups. Materials received, speakers heard, conventions attended, goals to reach, all come through this fine national organization. These widen the experiences and horizons sought by pupils.

In what other ways are the students in the agricultural department becoming a part of their community? Farm shows, livestock auctions, judging contests, county fairs—all such meetings offer the pupils many opportunities. To win in such affairs gives pride, security, and satisfaction which entitles one to a life of farming. To lose gives opportunities to see, to compare, and to plan, which overweigh any possible disappointment.

The Curriculum

What of the planning of the curriculum or of the offerings within a school's agriculture department? Are the pupils' choices "to take or not to take" agriculture left to chance? Are the offerings of Junior High planned to provide a good background on which to build interest, to begin planning a program? The teacher's public relations begin with the students. This is an important step in building interest in the senior high agriculture program.

One very obvious division of emphasis is in meeting the needs of the college-bound students and the needs of the graduation-into-agriculture students. This, of course, concerns college-

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Identified here are the essentials of the program of a beginning teacher.

Evaluative criteria for beginning-teacher programs

AUSTIN E. RITCHIE, Teacher Education, Ohio State University.

Austin E. Ritchie

THE competency needed by a teacher of vocational agriculture has increased tremendously in recent years. This is largely due to the acceleration in the complexity of our society and the advancement in technology and mechanization in the production of farm commodities. Some teacher educators, supervisors, and school administrators renounce the possibility of adequately preparing teachers of vocational agriculture in a four-year pre-service curriculum. They believe the teacher can be prepared only to make a good beginning in teaching and that teacher education has a responsibility for providing an in-service program for further developing the teacher's competency while employed.

First Year Is Important

The first year of teaching is considered a critical one in the profession. Therefore, it seems plausible that in-service education for beginning teachers should be carefully planned, conducted, and evaluated. Due to the importance of a beginning teacher program, the writer turned to evaluation as an effective means for studying and improving such a program. To achieve this task an evaluation instrument with the following major components reflecting what should be realized was developed.

1. Guiding principles to serve as guides in ascertaining values.
2. A check list consisting of specific items, evidences, and ratings.
3. Evaluation statements and scales.
4. A chart for summarizing the evaluation values.

The "Evaluative Criteria for In-service Education with Beginning Teachers of Vocational Agriculture"[1] was developed from selected literature, assistance of teacher educators from each region in the United States, and the writer's experience in conducting a beginning teacher program. Only the guiding principles are reported in this article.

Beginning teachers have some problems which are different and some problems which are similar to those of experienced teachers. Therefore, it seems wise that the program of in-service education for beginning teachers complement the in-service program for experienced teachers. Therefore, the writer recognizes that some of the principles could apply to an in-service program for experienced teachers.

Principles Involved

In accordance with the findings from the study, a program of in-service education for beginning teachers of vocational agriculture should satisfy the ensuing principles.

1. The professional personnel should have adequate training and experience with vocational education in agriculture to provide sufficient assistance for each teacher's needs.
2. The opportunity for recognizing individual differences and meeting needs should be provided by including a variety of professional activities.
3. The program should be cooperatively planned through the participation of personnel concerned.
4. The program should be coordinated and guided by a competent educator or supervisor in accordance with operating policies accepted by the personnel involved.
5. The teaching-learning situation should be improved through the exploration of school and community resources and contemporary methods of teaching.
6. The professional improvement of teachers should be augmented by a program of in-service education.
7. The promotion of the educational efforts of the school and community through democratic participation should be manifest.
8. The development of the local long-range program should be aided.
9. The utilization of useful techniques in selecting, planning, conducting, and evaluating students' farming programs should be facilitated.
10. The developing, conducting, and appraising of local young and adult farmer programs should be facilitated.
11. The planning, conducting, and appraising of local Future Farmers of America programs should be supplemented.
12. The local guidance and counseling of high school and young and adult

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[1]Based on Doctoral Dissertation, "Criteria for Evaluating Programs in Agricultural Education for Beginning Teachers," 1955.

A bulletin board display of current technical bulletins where beginning teachers meet is helpful.

Earl Kantner, Cooperating Teacher at Wauseon, Ohio, meets beginning teachers' needs in farm mechanics.

Dr. Ralph J. Woodin, O.S.U., provides beginning teachers with ideas for improving the teaching-learning situation.

An examination of one phase of the program of teacher preparation, with suggestions for improvement.

Supervised farming program responsibilities in teacher education

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C. E. Bundy

THERE is general agreement among leaders in agricultural education that teachers of vocational agriculture are not making maximum use of supervised farming activities in their instructional programs. We have many teachers who have organized their instructional programs quite largely around text book courses with very little emphasis given to supervised farming programs. Many teachers require each student to "carry" a productive project in order to satisfy the minimum provisions of the National Vocational Education Acts.

Most teachers of vocational agriculture do attempt to develop instructional programs which involve supervised farming activities. Their efforts, however, are only in part successful. Their ineffectiveness is due in part to a lack of understanding of the place of farming programs in vocational agriculture and to a lack of knowledge of the methods which are effective when instructional programs are centered around supervised farming activities.

While individual teachers can do much to improve their use of farming programs in organizing instruction, no rapid or extensive changes will come about without the aid of teacher trainers and supervisors. Teacher trainers must assume responsibility for pre-service training, and share with the supervisors the responsibility of providing training for teachers now on the job.

Our teacher education programs must be carefully developed. Certain understandings and abilities can be developed through pre-service programs. Others cannot be completely developed until the men are employed and have gained experience.

Proposed Teacher Education Program

1. *Philosophy concerning the place of farming programs in vocational agriculture.* Many of our trainees were not enrolled in vocational agriculture while in high school. They are completely unfamiliar with the real purposes of farming programs. Other trainees may have been enrolled in vocational agriculture classes where farming program activities were given minor consideration. We must provide for our trainees an opportunity to gain an understanding of the real value of these activities. The subject should be given emphasis in our special methods classes. Class field trips should be made to visit departments where desirable emphasis is being given to supervised farm practice; and we should use as student teaching centers only those departments having instructors who give proper emphasis to supervised farming programs.

2. *Course planning.* One of the most difficult problems in both pre-service and in-service training is to develop in the teacher the ability to organize the instructional program around the farming programs of the students. While in college the trainee completes a large number of courses in technical agriculture. Most of them were organized around subject matter headings with little emphasis upon follow-up by the student. The courses terminated with the passing of examinations. It is difficult for the trainee to see the possibility of organizing the courses in any other way.

Our trainees must be given an opportunity to organize a four-year instructional program around the problems, abilities, skills and practices which are needed in meeting the problems on the home farm. The home farm is the laboratory. Every problem involved on the home farm should be considered in planning the farming program. A problem may lead to a production project, an improvement project, or to a supplementary practice. These problems should be considered seasonally in an integrated program. The farming programs of the students should lead to their establishment in farming and should serve as the bases for vocational agriculture rather than as appendages to it. The instructors who organize their courses around problems, abilities, skills, and practices should be used as supervisors of student teachers. Their course outlines should be used as illustrations in the special methods classes. Following is an example of the organization of a unit around abilities and practices.

SWINE PRODUCTION

ABILITIES

A. Ability to analyze the home farm situation and determine the opportunities in swine production.
B. Ability to select desirable breeding and feeding stock.
C. Ability to feed and manage the sows during pregnancy.
D. Ability to care for the sows and litters at farrowing time.
E. Ability to feed and manage the sows and litters during the suckling period.
F. Ability to feed and manage the growing pigs.
G. Ability to control swine diseases and parasites.
H. Ability to provide desirable pasture.
I. Ability to provide adequate housing and equipment.
J. Ability to market hogs profitably.
K. Ability to keep and use swine records effectively.

SUB-ABILITIES

A. Ability to feed and manage the sows and litters during the suckling period.

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This teacher is using a lamb selected from a student's pen of 15 lambs and the carcass of a slaughtered lamb to teach the ability to select feeder lambs and breeding sheep. Such use of farming programs as the basis for instruction must be learned.

The supervised farming programs of the students must serve as the basis for the instructional program. This can be done only when the farming programs are sufficiently inclusive to include all problems which are encountered on the home farms of the students.

1. Ability to properly ear notch the pigs.
2. Ability to clip the needle teeth.
3. Ability to provide desirable housing.
4. Ability to provide adequate equipment.
5. Ability to properly feed the sows.
6. Ability to provide desirable creep feeding rations.
7. Ability to castrate male pigs.
8. Ability to control anemia.
9. Ability to vaccinate pigs for cholera.
10. Ability to vaccinate pigs for erysipelas.
11. Ability to provide satisfactory range.
12. Ability to wean the litters.

PRACTICES

1. Ear-notch the pigs at birth using a standard ear-notching system.
2. Clip the needle teeth smoothly before the pigs are three days old.
3. Use farrowing stalls or crates during the first week.
4. Use pig brooders or guard rails and heat lamps until pigs are weaned or are eight weeks of age.
5. Keep pens well bedded and in sanitary condition.
6. Feed the sows lightly a slightly laxative ration immediately after farrowing.
7. Have the sows on full feed a week after farrowing. Self-feed a ration containing 14 to 15 per cent protein that is fairly high in minerals and vitamins.
8. Feed the pigs a 24 per cent protein prestarter ration when from 7-14 days old.
9. Self-feed pigs an 18 per cent protein starter ration when from 2 to 5 weeks of age.
10. Feed a 14 per cent grower ration to pigs from 5 to 8 weeks of age.
11. Provide clean sod, give the pigs iron pills, or paint the sow's udder with copperas solution to control anemia.
12. Castrate pigs before they are four weeks of age.
13. Vaccinate pigs for cholera before they are six weeks of age.
14. Vaccinate pigs for erysipelas before they are eight weeks of age.
15. Fortify creep rations with 10 to 20 milligrams of antibiotics per pound of feed.
16. Provide clean legume pasture for sows and litters.
17. Haul the sows and litters to pasture to avoid disease and parasite losses.
18. Wean pigs when on full feed of starter or grower ration.
19. Wean larger and heavier pigs from litters first.

3. *Planning farming programs.* Prospective teachers of vocational agriculture do not receive training in farming program planning in courses in technical agriculture. We have perhaps assumed that men with good backgrounds in the subject matter fields can make their own adaptations of the subject matter as they organize their instructional programs. This assumption cannot be made. We find that our trainees must be given the opportunity to experience the same steps in the planning of farming programs which are experienced by members of the high school, young farmer and adult classes. We have found it desirable to have each trainee obtain a farming program planning experience separately in a special methods course in which the trainee completes each section of the record book for a productive project of his choice. He also lists possibilities for improvement projects and supplementary practices. By uses of this process the trainee is confronted with many of the same problems encountered by high school students. A comparison of the plans made by individual trainees serves to strengthen their understanding of the principles involved and their appreciation of the value of careful planning. We have encouraged our trainees to do two or three weeks of observation and student teaching work during the interim period between September 1 and the start of the fall quarter. They receive extra credit for the time spent since it is in addition to the regular period of student teaching included in the curriculum. Since it is at this time that high school students are making their farming program plans for the new school year, the trainees receive valuable experience concerning this phase of vocational agriculture work.

4. *Farm visitation and supervision.* Studies have been made which indicate a close correlation between the number and type of farm visits made and the effectiveness of the vocational agriculture program. It is assumed in many states that a minimum of six to eight visits per student must be made each year to maintain an effective program. To meet these standards it is necessary for a teacher of vocational agriculture to spend about 25 per cent of his time during the regular school year and about 75 per cent of his time during the summer months in farm visitation.

Most of us have not made adequate provision for this type of experience in our pre-service training programs. Only a few institutions now require a period of summer observation and student teaching experience. On the basis of percentage of time spent by instructors in farm visitation it would be logical for teacher training institutions to allocate one-fourth of the total student teaching time to summer experience.

There is considerable variation in the use of time in farm visitation and supervision by student teacher supervisors. Normally each student, if he is to be visited six to eight times each year, should be visited once every one to two months. It is appropriate then to expect our student teachers to visit the homes of each of their students on an average of at least once during each six weeks period.

We should use as critic teachers those instructors who visit their students often and provide effective on-farm instruction.

Some attention should be given this topic in special methods classes. We have found it helpful to get prospective teachers out to departments during their sophomore or junior years and observe the regular vocational agriculture instructor as he visits his students in supervising their farming programs.

5. *Records and record analyses.* The keeping of project records has been very painful to many vocational agriculture students. Many students have not seen the value of records. They have kept them to meet the minimum requirements and were happy to have their record books accepted by the vocational agriculture teacher. But they did not wish to see them again. Many teachers of vocational agriculture find the record keeping phase of farming program supervision very distressing. These teachers need help from supervisors and teacher trainers. Beginning teachers are especially in need of assistance.

It is very important that we develop in our trainees a philosophy and understanding of the place of business records in developing their farming programs. It is also imperative that we help them develop those abilities necessary to deal adequately with this phase of vocational agriculture work.

We have found it helpful to have the trainees fill out a record book, while enrolled in a special methods course, using data taken from a selected, completed record of a high school student.

The trainee has another opportunity to become familiar with the problems of record keeping while in the student teaching center. Trainees should be given the responsibility of assisting students in maintaining their records and in analyzing them.

Farming program records have little value unless they are used. We have found it helpful to the trainee to have him prepare a project record analysis sheet while in our special methods course. The trainees then take the forms to the student teaching centers where they are used in making comparative analyses of the productive projects completed by students in that particular center.

6. *In-service training.* The extent to which teacher trainers may have the opportunity and personnel to provide in-service training relating to supervised farming programs varies from state to state. Probably in most states we are not meeting the needs.

Those of us who have been associated with vocational agriculture for twenty years or more are aware of the many changes which have come about: (1) in our philosophy concerning the place of farming programs in vocational agriculture; (2) in the methods used in integrating farming programs in the instructional program; and (3) in the effectiveness of farming programs in the establishment of our students in farming. In many cases our older teachers of vocational agriculture have been so busy with the detail in conducting their programs that they have not kept up to date. These men need help.

As pointed out previously, we can go only about so far in training *prospective* teachers in regard to the methods of using farming programs effectively in the instructional program. A part of the instruction will not be effective until

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Evaluating individual farming programs

An important phase of evaluation in Vo-Ag.

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S. M. Smith

THE farming program of a vocational agriculture student should be the focal point of much of our teaching. It is essential, therefore, that we evaluate it from time to time so that our teaching may be most effective.

Such an evaluation should be made from several standpoints:

1. *The individual student.* The program must challenge the ambitious student; it must satisfy the less aggressive one. In any case, it must be the real core of his agricultural education.

2. *The parents.* Time, effort and money are necessarily expended in setting up a farming program. The results must appear worth while to the parents, since they play an intergral part in any successful program.

3. *The teacher.* The farming programs of the students in vocational agriculture departments are true reflections of the effectiveness of the teaching and training program conducted by the teacher.

4. *The administrative officers of the school and the department.* A careful evaluation of individual farming programs of students enrolled in vocational agriculture provides one excellent way for local and area supervisors to determine the effectiveness of the program.

Some Criteria

Any evaluation must be made in terms of what the farming program is designed to do. In introducing freshman students to the matter of supervised practice programs, I present the following objectives. These objectives might well be used as criteria in such evaluations.

1. *It should be interesting.* The program should be so planned that it will stimulate interest on the part of the boy. He should start with things he likes and the program should be so set up that farming is interesting and challenging.

2. *The program should provide experience.* Basic skills pertinent to enterprises and decisions likely to confront the practical farmer should be emphasized. An adequate record keeping ability should be developed.

3. *It should result in some improvement in the home farm business.* A program may improve present conditions or introduce new practices and enterprises which will have an important bearing on the future success of the home farm business.

4. *The program should show financial return.* Although a program should be instructional and perhaps exploratory to some extent, it must be operated on a sound financial basis and show reasonable returns by conventional measures such as equity in farming and labor income.

5. *A good farming program should provide a basis for teaching sound business principles.* It should be financed and operated in a business-like way with special attention to pupil-parent (or farmer) agreements. Student ownership and managerial responsibility are most essential.

6. *The program should lead to eventual establishment in farming or an allied agricultural occupation.* The operation and ownership of a successful farm business might well be the ultimate goal of every Vo-Ag student as he plans for and works in his supervised farming program. However, circumstances often dictate differently and the student who enters service, attends college, or enters some agricultural occupation other than farming, may benefit immeasurably from a well planned and executed supervised practice program.

Contributory Factors

In using the foregoing objectives as the basis for an evaluation, several contributory factors must be considered.

1. *The student himself.* The boy's physical and mental ability must be considered. The program must be appraised as an individual program suited to the individual boy. It will not always be wise to evaluate one program in terms of another. Progress as well as achievement must always be considered.

2. *The parents.* Racial and financial background as well as personalities often present serious problems to the student and teacher. Education of parents and development of confidence on the part of both student and parents often is time consuming and makes the development seem slow. Again, progress rather than achievement may be the best measure.

3. *The evaluation itself.* Too often we measure the program by the dollars, the animals, the skills, or the awards—and miss the most important but less tangible factor of all, what has it done for the boy, or better yet, what has the boy done for himself? □

Bases for Evaluation

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bound students who are interested in training related to agriculture. Their work must combine the practical with the academic such as to prepare them for admission to a successful career in college.

Community Relationships

A vocational agriculture program cannot successfully meet the needs of the students within a school unless it embraces every opportunity to learn of and learn from the community. (In these days of consolidation, one really must refer to communities). Lay councils or committees bring local farmers, feed store owners, bankers, and many other interested members of the community into the school. As they learn about the school, the Agricultural Program learns from them.

Student speakers to community groups, along with community speakers to the student groups, show evidence of an Agricultural Program which builds upon the cooperative endeavors and shared interests of all. Banquets, such as Father and Son or FFA, offer excellent opportunities for such promotional activities as awarding honorary degrees to local people who are worthy of serving as models for youth.

Use of School Environment

The use made of the immediate environment of the school is an indication of the strength of an Agricultural Program. Beautification of the school grounds is a project long open to this department, too often sadly neglected. But in a situation such as the one at our school, there is a school farm. What use is made of this, beyond the to-be-expected raising and harvesting of crops? On the one hand, a farm pond, a school forest, nature trails, and nursery offer many opportunities for certain interests and areas in agriculture. On the other hand, the farm offers opportunities for the introduction of new seeds, the raising of specialized crops, the use of conservation measures, experimentation with new ideas and so forth. In the area of livestock there are many opportunities for feeding practice, breeding and selling, use of purebred animals (which, in turn, reach the homes and farms of many students) and the study of volume marketing practices.

Relations with State Agencies

The success of the Agricultural Program can further be measured through knowledge of its relations with state supervisory personnel, the state agriculture colleges, and other related agencies. Frequent visits by such agencies, often bringing along their guests, indicate that here is a program worthy of notice which is functioning effectively.

Shop Activities

Farm shops best indicate this success by the presence of machinery, tools, and equipment which are brought in from pupils' homes for repair and conditioning. This picture is indicative of interest, practical value and cooperation. It also indicates the growth of students and their ability to care for such equipment adequately.

Classroom appearance and all that takes place in it to produce pupil learnings; affiliations with ever widening groups; community relations; use of the school environment; relations with state department; and a really effective school shop program - - - these reflect the value of an Agricultural Program. □

Studies in Progress in Agricultural Education

Reported for the year ending May, 1957.

INTER-REGION

Compiled by J. N. Freeman
Lincoln University

BAKER, LEE A.—"Tractor Maintenance Practices of Non-white Farm Owners in Union County, North Carolina." Thesis, M.S., The Agricultural and Technical College of North Carolina.

CATCHINGS, BERNARD ALGERNON — "A Comparative Study of the Economic Status of 100 Farmers in Mitchell County, Georgia." Non-Thesis, M.S., Florida A and M University.

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NORTH ATLANTIC REGION

Compiled by Henry S. Brunner
The Pennsylvania State University

ANTHONY, FRANK—"Methods of Securing Funds for Financing Travel and Other Expenses of Vocational Agriculture Boys to Participate in Activities at the National FFA Convention at Kansas City." Staff study, Department of Agricultural Education, The Pennsylvania State University.

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NORTH CENTRAL REGION

Compiled by H. P. Sweany
Michigan State University

ANDREWS, DALE — "Problem Oriented Teaching and Pupil Achievement in Vocational Agriculture." Thesis, Ph.D., Department of Agricultural Education, University of Minnesota.

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Montana State College

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Evaluative Criteria - - -

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farmer students should be favorably influenced.

13. The planning, organizing, and maintaining of physical facilities in a department should be effected.
14. The keeping of records and completing of reports for a department should be fostered.
15. The public relations program which utilizes suggestions from the public and brings recognition to the local school and department should be promoted.
16. An evaluation of teacher competence and local programs should utilize individual and group techniques. □

The March issue of the Magazine (the last for which circulation figures were available) reached 9,447 subscribers. This is an increase of 372 over the same month one year ago.

Let's look at our "out-of-school" programs

Such appraisal reveals needs for the future.

D. R. PURKEY, Assistant State Supervisor, Ohio.

"A series of ten meetings will be held in the Vo-Ag room every Monday night. Topic will be 'Feeding Dairy Cattle.'" The above notice could have been sent to a group of farmers in either 1926 or 1956. Have we progressed in our program? We teach our high school classes seasonal topics. Do we forget this when it comes to Adults and Young Farmers? Many teachers believe the winter months are the only time farmers are interested in education. Is this true? Are they too busy to attend live demonstrations, observe improved practices, or check a fertility experiment in summer, spring, or fall? Do we believe the only *successful* educational program for Adults and Young Farmers needs to have at least 10 or 15 *sessions* with adequate attendance? What has happened to "on-farm small group" meetings? Why should the teacher of Vo-Ag be overloaded in the winter months with Y.F., A.F., and H.S. boys? Is it necessary to divide the group into Y.F. and A.F. for *all educational* sessions? Is age the best division? Is not a ration for a gilt the same for an adult farmer as a young farmer?

Keeping Up with Changes

Anyone can raise questions concerning our program, but finding the solution and "desirable procedures" is more difficult. *If* change is needed, we must assume our farm population has changed. Would you agree with me this assumption is correct?

In order to work out a solution to the above points (providing they need one), let's find who is responsible—supervisors, teacher trainers, teachers, or school administrators. I believe we can start with supervision. Have we, as supervisors, been keeping up on farming situations? We may make the policy, "all teachers shall have an Adult Young Farmer program!" Then, what have we done to help? Have we suggested they meet together on common problems under discussion? Have we suggested and helped plan summer educational meetings that are timely? Have we led the way in course organization in meeting farmers' needs? Have we insisted that 10 or 15 sessions are necessary before it is good? Have we prepared programs (samples) that are *timely year round educational programs?* Have we given adequate recognition and encouragement to individual and small group instruction? Have we been more concerned with reports than education? If we answer "yes" to all these questions we need not take the blame, if blame needs to be taken, for the short-comings in out-of-school programs.

Responsibilities of Teacher Education

Let's look at Teacher Trainers. Are they to blame? Has every trainee had participating experience with both young and adult farm work? Have all trainees had experience in building a year-around educational program? Has service training of older teachers assisted them in meeting their problems? Have *methods of teaching* been geared to adult and young farmer teaching as well as to high school instruction?

Robert Phillips, teacher of vocational agriculture at London, Ohio, meets a young farmer and his parents.

Another look at the teacher of vocational agriculture and his administrator. Have they done the best job of teaching and conducting the program that they know how? If not, have they experimented with new ideas and distribution of teacher load?

The above discussion is to explore the possibility of a "new look" at our out-of-school programs.

Basis for Grouping

Many of the problems of older farmers are the same as those of the younger man. A part-time farmer, 35 to 45 years of age who has moved out from the city to start his farming career, has more problems in common with the young farmer just starting than an older group. Age is not the answer to the division problem. A question could be raised if they should be divided. If so, would a division be better on the basis of need or specialized interest than on age? Could we serve all three groups as well by combining most of the educational sessions and from that group set up additional special interest groups? These may or may not be on the basis of age.

Much of our best educational work is done *on the farms* individually or in small groups. What credit do we give the agriculture teacher for this work? Our state and federal reports and standards only specify the number of meetings and enrollment. Some results need to be noted through improved practices, but do we give proper credit for personalization of classroom teaching?

A Pattern

It seems that a good pattern for a young and adult farmer program (if we must continue to call them by that name) would be as follows:

(1) A year-around program for all interested farmers. (Young and old)
(2) Meet once a month (at least) on some timely topic for discussion.
(3) From this group (or apart from it) meet special interest groups on farms in small groups or in the classroom where more personal attention and application of practices can be made.
(4) Social meetings (open to all who feel they are young enough) be a part of the program, but conducted by the members or an advisory committee.
(5) Organize a YFA on same basis as FFA with mature objectives and purposes.
(6) During peak loads of organized instruction for all-day students (school months) cut the load of adult and young farmer instruction.

The purpose of the above procedure would be to (1) give more emphasis to on-farm instruction for adults and young farmers, (2) conduct the instruction on a more personal basis, (3) divide groups according to interest and need rather than age, and (4) organize the group locally, state-wide, and nationally in order to have media for it to more nearly run its own show. □

The Cover Picture

Budding of citrus stock is one of the operations which Vo-Ag students in many sections of Florida learn to perform. The cover picture shows students of the Frost-proof department of Vocational Agriculture in Polk County, getting practical nursery experience. This county in Florida ranks as one of the twelve most prosperous counties in the United States and is the leading citrus producing county in Florida and the U. S. A. Shown in the background is a mature citrus grove. Beef cattle production also is a major enterprise in Polk County. Eighty per cent of the phosphate mined in the United States comes from this county.

The plot on which the boys in the picture are staking year old citrus buds is a school laboratory plot used to carry out practical demonstrations and provide learning-by-doing experiences. J. L. Cannon is the present Vo-Ag instructor who directs the operation and management of the plot.

Picture furnished by J. K. Privett, Coordinator for Vocational Agriculture.

A "point system" to evaluate Vo-Ag and FFA

The Point System in Measuring Effectiveness of Vo-Ag and FFA Programs of Work.

JOSEPH P. DERMODY, Vo-Ag Instructor, Elba, N. Y.

Joseph P. Dermody

THERE have been many and varied methods of measuring effectiveness of Vocational Agriculture and FFA programs but no one "tool" accomplishes so much for us and operates so automatically as a good point system. Such a system is rewarding to the students and provides awards for their activities. This program must, of course, be tuned to a particular department in a particular area. Although this device is closely associated with the local FFA Chapter, it obviously implements and measures a good Vo-Ag program.

During the fifteen years of experience with achievement award systems, I feel that we have one in operation in our department which is tailored to fit our needs and produces tangible results. In revising a program annually we are able to emphasize or lessen the importance of a particular phase or activity.

How Organized

Following is a brief resume of the important regulations governing our achievement contest.

Period covered by contest—A full twelve-month year ending in late spring.

Point Award levels—Point range and various award levels are determined by experience. At the present time the lowest award is given for the earning of 2,000 points. This award consists of a suitable ribbon. At the 5,000-point level a bronze award is presented along with an FFA school letter. At 7,500 points the silver award and at 10,000 points the gold award is given. It is a simple matter to work all state and national awards into this contest. From time to time the points earned during a specified time or in a specified activity may be helpful in determining other awards.

Presentation of Awards—Awards are presented at the annual banquet held in late April. These awards have such a point range that 75 or 80 per cent of the total enrollment is recognized in one form or another. This is satisfying to many parents attending the banquet. The group award system—gold, silver, and bronze—was instituted three years ago and has improved the morale of the students considerably.

Organization of Point earning techniques—The program is divided into nine major sections. The sections are identical in name with those of the national FFA program of work, i.e., Section one, Supervised Farming; Section two, Cooperative Activities; etc. Each subsection is placed in its proper place and numbered decimally, i.e., Section 1.1, Improved Farm Practices, Section 1.2, Farm Mechanics, etc.

Reviewed Each Year

Each year the executive committee of our FFA Chapter meets with the adviser to consider revisions in the program. These revisions may consist of adding or deleting items or raising or lowering of the point value of one or more items. It is then duplicated and a copy of the revised program distributed to each member. At the present time our program consists of eight double-spaced typewritten pages. Each student keeps a cumulative record on standard forms in his class notebook and a duplicate copy is kept in the classroom file. Some teachers have felt that this is excessive bookkeeping but I feel that most Vo-Ag students can well use this added practice.

Results

Any device is usually measured by the results it attains. The following are only a few of the practical results obtained from using such an achievement program.

1. Five winners of this contest during the last seven years have been awarded the Empire Farmer (state) FFA degree.
2. One hundred per cent collection of local, county, state, and national FFA dues.
3. The maintenance of a comfortable FFA treasury balance of $350 without excessive effort on the part of instructor.
4. The negotiating of many signed agreements between Vo-Ag students and parents or other individuals.
5. An efficient and practical farm mechanics program.
6. A winning demonstration team and the encouragement of several other demonstrators who are ready to demonstrate before groups for practice and for the points received.
7. Ninty per cent of enrollment subscribe to the national FFA magazine.
8. Good attendance at county meetings.
9. Over half of the members subscribe to one or two breed or crop journals.
10. Excellent participation in State leadership camping program.
11. The beginning of a savings program for many members.
12. The increasing of the student's net worth which aids in the conduct of his supervised farming program.
13. The active participation in fairs and shows.
14. Seniors are encouraged to apply for admission to advanced schools early in their last year of high school.
15. The development of desirable hobbies.
16. Students are encouraged to practice skills learned in Vo-Ag at home and on neighbors' farms.
17. Nearly all members have purchased regulation FFA jackets.

Results in Other Types of Training

This point system of achieving measurable results was explained to each of two sixth grade teachers in separate school systems who were anxious to try some device to cope with "individual differences." In each case, after a period of time had elapsed in order to determine proportionate values for many and varied activities, the results were noteworthy.

It is interesting to observe that when awards are presented at our annual banquet for the twelve-month year just ended, many parents and friends request a copy of our most recently revised program.* This, I feel, is one way for them to evaluate a Vo-Ag program quite objectively. □

*A copy of the "Achievement Contest" program containing rules, and the point system may be obtained from the author.

Supervised Farming - - -

(Continued from page 249)

they have had teaching experience. Beginning teachers are especially in need of in-service training.

The following are some of the methods that we might use as teacher trainers in providing in-service training in supervised farming programs:

a. Offer on-campus graduate courses during the summer.
b. Offer twilight or evening classes on campus during the school year.
c. Offer off-campus graduate courses during the school year.
d. Sponsor or jointly sponsor with members of the supervisory staff district or sub-district supervised farming program conferences or workshops.
e. Prepare demonstrations or other presentations for district or state-called conferences.
f. Provide assistance to instructors in summarizing farming program records.
g. Prepare materials and aids such as farm survey forms, enterprise record analysis forms, summaries of efficiency standards and goals, budget information, examples of parent-son agreements, examples of production procedure outlines, summaries of completed records, suggestions for effective on-farm supervision, lists of supplementary practices and lists of improvement project possibilities.

We have a responsibility as teacher trainers in assisting the supervisory staffs in improving the effectiveness of supervised farm practice in vocational agriculture. It is imperative that we give this phase of our teacher education major emphasis. □

Emphasize self-evaluation in Vo-Ag

One state is using a device developed on a Regional basis for this purpose.

COLA D. WATSON, Supervisor, Vermont.

IT is evident that any program of improvement of a vocational agriculture department will be most effective if it is based on a self-analysis of the factors involved and teacher determination to do something about those that need strengthening or up-grading. Once the areas that need attention have been determined, then all possible resources should be made available to the teacher to assist him in carrying out the plans for improvement.

A few years ago the supervisors in the North Atlantic Region expressed a desire to develop some kind of supervisory guide in the belief that such an instrument would be of value to each state in the region in strengthening their Vo-Ag programs. Subsequently, there was prepared, through committee assignments, a Supervisory Guide For Vocational Agriculture Teachers.* It covered the areas of administration, the instructional program, and public relations. Standards were set in each of these areas and provision was made to rate the area or activity as satisfactory, fair, or unsatisfactory. For example, one section of the Guide deals with *The Instructional Program,* as follows—

Introductory statement: "The instructional program in vocational agriculture is designed to teach *present and prospective* farmers to operate farms successfully in the community in which they live and is most effectively woven in and about the operation of the home farms of the pupils and farmers enrolled in the agriculture classes. Vocational instruction is considered meaningful to pupils and farmers when they experience planning and performance in connection with actual job situations. Achievement of goals which are higher than average and improvement in the farming operation should result from effective instruction. The farming program is basic to all instruction in agriculture and involves experience, training, ownership of productive enterprises, and such managership and partnership arrangements as lead progressively to establishment in farming."

Each state was expected to adapt the instrument to its particular conditions and to determine the method of use.

How the Guide Is Used

With the basic philosophy that self-evaluation results in a more rapid and more effective program of improvement, efforts have been made in Vermont to use the Supervisory Guide to stimulate a program of systematic self-evaluation of Vo-Ag departments by teachers. January 1, 1956 was designated as E Day (Evaluation Day) and each teacher was supplied with a copy of the Supervisory Guide on which he was asked to complete the evaluation of his department.

Subsequent visits by supervisory staff members were used to obtain a copy of the teacher's evaluation and to discuss with him each area that he had rated unsatisfactory or fair. There was never any attempt made to get the teacher to alter or change his original rating but emphasis was placed on the formulation of both short-term and long-range plans to improve or strengthen the areas that he had indicated as needing attention. The services of the state supervisory staff and the local school administrators were enlisted whenever it appeared that they could assist the teacher in accomplishing his objectives.

It is difficult to evaluate the effectiveness of this effort on the basis of one year's experience; however, there have been many evidences of teacher satisfaction with the procedure. Statements like "If I had only thought of this matter I could have done something about it a long time ago," have been common from teachers.

Results Have Been Encouraging

This appears to point up the value of having an evaluation instrument like the Supervisory Guide to provide a uniform pattern of department evaluation. If the method of use results in a continuous program of self-evaluation of departments by teachers then the procedure will really pay dividends in the form of stronger Vo-Ag departments.

It is anticipated that each department will be re-evaluated by the teacher each year in an effort to continue emphasis on weak areas and to maintain balanced programs in all departments. A checking code will be established so the same Guide may be used for a period of three to five years. This will allow the teacher to make comparisons easily of evaluation checks in all areas from one year to another. □

* A copy of the Guide referred to may be obtained from the author.

V. G. Martin

Vocational education in agriculture lost a respected leader and sound advocate in March in the death of V. G. Martin who, at the time and for a number of years preceding, was head of the Department of Agricultural Education at Mississippi State College. Professor Martin spent his professional lifetime in vocational agriculture and became known and respected for his insistence upon maintaining vocational objectives in local, state and national programs. For several years he had been chairman of the Teacher Training Committee of the Agricultural Education Section of the A. V. A. and had represented that committee in the deliberations of the Land Grant College Association meetings which dealt with teacher preparation. His influence will be missed greatly in his State, Region and throughout the country.

A Sample of the Form Used

Area	*Standard*	*Evaluation* S	F	U
A. Classroom instruction	1. The teacher gives evidence of having a sound vocational philosophy with respect to selecting and teaching farm jobs. He treats vocational education as a "Learning by doing" process.			
	2. The teacher, through farm visitation and analysis of home farm situation, has a working knowledge of the possibilities for improvement of the operation of the home farm.			
	3. A course of study has been prepared which incorporates supervised farming program needs of the enrollees and a cross section of the agriculture of the community.			
	4. Enrollees are given an opportunity to participate in the selection of jobs to be studied during the term.			
	5. The jobs selected for teaching fill opportune needs in developing pupil ability to conduct his supervised farming program and to operate the farm.			
	6. The teacher has a plan for each unit of instruction which provides a variety of learning activities and the efficient use of time.			
	7. Pupils are motivated by applying instruction to problems found in their supervised farming programs and home farm situations.			
	Etc.			

To evaluate is to grow!

Some criteria to use in planned, systematic evaluations which lead to teacher growth and improved programs.

RON PAIGE, Senior 'Ag-Ed' Trainee, Montana State College.

THE purposes of evaluating the total program in Agricultural Education are to: (1) Find out the strengths and weaknesses of the program, (2) Help the teacher to evaluate the effectiveness of his activities, and (3) Determine ways and means of improving the program. Evaluating a program occasionally helps to keep the teacher alert and working for the improvement of his program. It also helps to keep the advisory groups interested in the program.

It must also be remembered that our program is always being evaluated by those who are affected by it. Their unorganized evaluation may be unjust because of the probability that it has been based on objectives in conflict with those of your program in Vo-Ag. A complete, organized evaluation discourages evaluations based on such aspects of the program as teacher's actions, discipline, winnings at fairs or attendance at adult classes. Systematic evaluations take the teacher off the 'hot spot'. Therefore, with its other advantages, an evaluation is well worth while.

It is rather hard to separate program and pupil evaluation because the growth of the pupil is largely dependent on the effectiveness of the program. But for purposes of this article we shall treat them somewhat separately. The purposes then of pupil evaluation are: (1) to determine the extent and rate of pupil growth, (2) to help the pupil understand himself, his potentialities and his achievements and (3) to provide information essential to an effective guidance program.

Guides to Use in Evaluation

To evaluate is essential but to do it properly is just as essential. What, then, are some of the guides to use in conducting a good evaluation?

Who should participate in an evaluation? A number of people and groups are continually evaluating the program, so it is well to include them in a systematic, planned evaluation based on valid objectives. The following persons and groups or their representatives should be used: persons from outside the community who represent our state, national and world needs for good Vo-Ag in agriculture; the advisory council; adult class and young farmer class members; high school pupils; parents; the board of education, school administrator and other teachers; professional educators, and the general public.

When to evaluate? Evaluation is a continuous process that begins with program planning and is carried on throughout the program. Therefore it should be made each year.

What to evaluate? Generally speaking it is better to evaluate results than ways and means. In evaluating ways and means compare them with ideals, approved practices and standards which are recognized as valid in agricultural education. Evaluating outcomes or results of such things as the change in agriculture provides effective means of evaluation.

Specific Evaluations and Their Criteria

All phases of Vo-Ag should be included in an evaluation program. The following headings for evaluating a total program have been developed by the National Committee on Standards for Vocational Agriculture.

1. Long-time plan for the local program.
2. All-day instruction
   a. supervised farming programs
   b. the course of study
   c. Future Farmer activities
   d. time
   e. teaching procedures
3. Young farmer instruction
   a. supervised farming program
   b. course of study
   c. organization
   d. teaching
4. Adult farmer program
   a. related farming activities
   b. course of study
   c. organization
   d. teaching
5. The teacher
   a. qualifications
   b. relationship
6. The students
   a. selection
   b. information
7. Agriculture room and equipment
8. Farm shop
9. Follow-up and establishment

Criteria: The following criteria may be used in evaluating the long-time plan for the local program.

1. Does it meet the needs of the community and individual farmers?
2. Is it designed to improve some phase or phases of agriculture in the community?
3. Is it designed to teach present and prospective farmers to operate farms successfully in their area?

Criteria to Use in Evaluating the All-Day Instruction

1. Does the Vo-Ag teacher treat vocational education as a "learning by doing" process?
2. Does the teacher, through farm visitation and analysis of home farm situations, have a working knowledge of the possibilities for improvement of the operation of the home farm?
3. Has a course of study been prepared which incorporates the supervised farming program needs of the enrollees and a cross section of the agriculture in the community?
4. Are students given a chance to select the jobs studied during the term?
5. Do jobs selected for teaching fill the needs in developing the pupil's ability to conduct his supervised farming program and to operate the farm?
6. Does the teacher have a plan for each unit of instruction that provides a variety of learning activities and efficient use of time?
7. Are pupils motivated by instruction applied to problems faced by the students?
8. Are frequent, well conducted field trips used?
9. Is the FFA Chapter organized with a charter, constitution and by-laws and a full complement of officers?
10. Are meetings held regularly and conducted in the proper manner?
11. Does the Chapter have a challenging program of work?
12. Does a large percentage of the members participate?

Criteria to Use in Evaluating the Young Farmer and Adult Farmer Programs

1. Is the course of study organized to meet the needs of the enrollees and the community.
2. Is the school administration and community well informed of the program?
3. Is group instruction given on the farm as well as in the classroom and shop?
4. Does the teacher provide regular, individual on-the-farm instruction to all young and adult farmers enrolled in the program?
5. Are good resource people used in the instructional program?
6. Is the course taught as a unit rather than a series of unrelated topics?

Criteria to Use in Evaluating the Teacher

1. Does the teacher grow professionally by maintaining active membership in teacher organizations, by attending professional-growth meetings and by keeping abreast of current agricultural developments through reading and schooling?
2. Does the teacher maintain a neat personal appearance?
3. Is the teacher congenial and cooperative when working with others?
4. Does the teacher maintain good discipline while still conducting his class in a friendly atmosphere where the students are relaxed?
5. Does the teacher have sufficient knowledge of subject matter and teaching procedures?
6. Does the teacher show interest in the students and is he willing to help and counsel them?
7. Does the teacher have an adequate concept of the aims of Vo-Ag?
8. Is the teacher able to motivate the students so that proper learning takes place?
9. Does the teacher serve well as an FFA adviser?

Criteria to Use in Evaluating the Pupil

1. How well does the pupil participate in class discussion?
2. What is the quality and amount of work done in the farm mechanics program?

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How do Vo-Ag graduates perform?

Influence of High School Vocational Agriculture on Production and Management practices Used by Graduates*

EDWARD E. DAKAN, Vo-Ag Instructor, Manning, Iowa.

Edward Dakan

THIS study was carried on in cooperation with four other graduate students at Iowa State College. All of the studies are related to the influence of high school vocational agriculture on the progress of high school graduates in becoming established in farming. The researchers worked cooperatively in developing the questionnaire, selection of the sample, interviewing the graduates and in processing the data.

The purpose of this study was to determine the use made of farm production and management practices by farmers who had vocational agriculture training in high school and by those farmers who had no vocational agriculture training.

Method Used

Only production and management practices which had been shown to be statistically significant indicators of the contributions of vocational agriculture training were selected from earlier thesis studies. Besides the 24 production and management practices there was a separate section in the form of a check list by which different kinds of information kept by graduates in their farm records were accounted for. The purpose of this section was to determine the extent to which farm records were being kept.

High schools which offered vocational agriculture during at least 11 of the 12 years from 1943 through 1954 were paired with schools that did not offer vocational agriculture during the same period. Pairings were made on the basis of location, population of town, high school enrollment and soil type. After 45 pairings had been made, 20 pairs were drawn at random.

Investigators visited each school and obtained lists of farm boys who had graduated during the 1943-1954 period. Only those graduates who could meet the qualifications outlined below were included in the sample.

1. Graduate was farming at the time the study was made. A farmer was defined as a graduate who spent 50 per cent or more of his time on a farm and who received 50 per cent or more of his income from farming.
2. Graduate from a high school offering vocational agriculture must have been enrolled for three or more years of vocational agriculture.

Silt deposits following a heavy rain are being viewed by a teacher of vocational agriculture and his sophomore class. The findings in this study indicate that vocational agriculture tends toward correction of such conditions by Vo-Ag graduates.

The total sample consisted of 320 graduates. Of the 320 graduates, 160 had three or more years of vocational agriculture training in high school and 160 had not had such training. One half of each group, or 80 farmers, must have been graduated from high school during the 1943-1948 period, while the other 80 members of the group must have been graduated during the 1949-1954 period. Finally, a further breakdown of the sample specified that out of each of the time periods under consideration in this study, 40 of the graduates must have been sons of landowners and 40 must have been sons of non-landowners.

Each of the 320 farmers was interviewed personally. The completed interview forms were coded and the information was transferred to IBM cards.

Vocational agriculture graduates and nonvocational agriculture graduates tended to originate from similar size home farms and farms with similar numbers of crop acres. About equal numbers of fathers of members of both groups were living at the time of graduation. Likewise, graduates in both groups were members of families containing similar numbers of brothers.

It was found that more of the vocational agriculture graduates were married, were farming and farming larger acreages. A greater degree of management responsibilities of the vocational agriculture graduates was indicated by prevalence of leasing arrangements.

Mean scores were computed for the responses of the graduates for each practice and analysis of variance tests were made for the statistical treatment in this study.

Use of Farm Practices

Of the 24 practices in this study, vocational agriculture graduates had higher mean scores for 23 practices. Only for the practice of applying commercial fertilizer according to soil test recommendations was the mean score higher for the control group.

The five practices for which the differences were significant at the one per cent level were as follows: separate sows from breeding herd at least three days before farrowing; separate the castration, the vaccination and weaning of pigs by at least two weeks; use farm records in planning and managing the cropping system; use farm records in planning and managing the livestock program; and use farm records in making use of labor, machinery and power. Because the mean scores for these practices were, in all cases, higher for the vocational agriculture group, the differences which existed may be considered to be a result of vocational agriculture training.

Significant differences at the five per cent level were found for the following four practices: castrate boar pigs before eight weeks; plow down a green manure crop; construct grass waterways; and use a rotation containing a legume.

The mean scores of the vocational agriculture graduates were higher for fourteen practices, but the differences between the two groups proved to be non-significant when analysis of variance tests were made. These practices were as follows: separate gilts from the fattening herd before breeding time; use a complete set of guard rails or farrowing stalls; raise pigs on clean legume pasture; use BHC (Benzene Hexachloride), lindane, or medicated mange oil to control mange or lice; renovate old worn down bluegrass pastures; check for corn borer every day by determining whether 50 per cent of the plants show leaf damage or indications of feeding after corn is 30 inches high; use insecticides to control corn root worm; crib corn with 20 per cent or less moisture content; test home grown seed oats for germination before seeding; clean home grown seed oats before seeding; wipe cows' udders and flanks before milking; provide a protein supplement for dairy cows; provide a protein supplement for beef cows; and dehorn calves as soon as nubbins begin to form on the skin.

In a separate section of the questionnaire the extent to which farm records were being kept was considered. Using a scoring system based on the assumption that certain types of information were more indicative of the usefulness of records, some interactions with practices were calculated by use of analysis of variance.

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* Reported from a study made while meeting requirements for the M.S. degree at Iowa State College, 1956.

Why they enroll in adult farmer courses

This will help you in planning enrollment procedures.

LLOYD J. PHIPPS, Teacher Education, University of Illinois.

Lloyd J. Phipps

WHAT influences farmers to enroll in adult farmer courses? Is it the newspaper publicity? Is it the announcements of the courses by cards or letters? Is it the reputation of the teachers? Is it the reputatation of former courses? Is it the "thing" to do in the community? Is it the personal invitation of the teacher? Is it the personal invitations by other farmers who are serving on a committee to get the course under way, or is it a combination of several or all of these influences?

These are a few of the questions that come to the mind of a teacher when he plans his adult courses. As a means of obtaining some of the information needed to answer questions such as these, the farmers enrolled in 83 adult farmer courses in 63 schools in Illinois were surveyed in 1955 and asked the following question: "What influenced you to attend this course?" The 63 schools selected for the study were chosen at random, and 994 farmers enrolled in the adult farmer courses in these 63 communities responded to the question.

The 994 farmers were given an opportunity to check at the last meeting of their courses one or more of the following as the reason they enrolled in the adult course they had just completed:

1. Contacted by a council member, committee member, or neighbor
2. Contacted by teacher
3. Received a card or letter about the course
4. Read publicity about the course
5. Other

Reasons Given

Approximately 25 per cent of the 994 farmers checked two or more factors as influentials in motivating their enrollment in the adult courses they had just completed. Three hundred and twenty-two or 32.4 per cent of the 994 farmers checked that they were "influenced" to attend because they were contacted by the teacher. Three hundred and twelve or 31.4 per cent were "influenced" by being contacted by a council member, committee member, or neighbor. Three hundred and three or 30.5 per cent were "influenced" to attend by receiving a card or letter about the course. Two hundred and twenty-nine or 22.9 per cent were "influenced" to attend by reading publicity about the course, and 52 farmers checked the "Other" column.

Personal Contact Lacking

In all of the 83 courses involved in the study, cards or letters or other publicity such as newspaper articles were used to stimulate enrollment in the courses. However, for many of the courses no attempt was made to enroll farmers by personal contact. Also, in many of the courses where an attempt was made to provide prospective enrollees with a "face-to-face" invitation to enroll, the teacher and others were successful in contacting only a small number of farmers.

Data were obtained on the number of farmers enrolled before the first meeting of the courses who were contacted personally by someone. Data, however, were not collected regarding whether a farmer was contacted personally if he enrolled at the first meeting of a course or during a course. In the 83 courses studied, 1,771 farmers were considered enrollees and 881 of these 1,771 were enrolled before the first meeting of the courses. Four hundred and three of the 881 enrolled before the first meetings of the courses were enrolled by teachers. Three hundred and seventy-six were enrolled by a council or committee member.

If the 994 who responded to the question regarding what influenced them to enroll in the courses they had just completed are representative of the 1,771 who were enrolled in the courses, it is the writer's opinion that 40 to 50 per cent of the 994 farmers studied were never contacted personally by anyone regarding their enrollment in a course. If this hypothesis is true, a fact worthy of attention is that 534 of the 994 farmers studied indicated that they were influenced to attend the adult courses they had just completed because of a personal contact by someone. Thus, the assumption often made by adult educators that a personal invitation to attend an adult course is an effective stimulant for the enrollment in and completion of the course seems to be in agreement with the results obtained in the study.

Contacts Made by Farmers

It is the writer's opinion that a personal invitation from another farmer may be as effective in stimulating a farmer to enroll in a course as a personal "face-to-face" invitation by the teacher of the course. This conclusion is reached because the writer has found empirically that in Illinois many successful teachers of adult classes do not personally invite farmers to enroll in their courses if they have arranged for committees of farmers to invite their neighbors to enroll in the courses. Also, the teachers in Illinois who do invite farmers personally to enroll in their courses usually do not use committees of farmers to assist in obtaining the enrollment in the courses.

The results of the study seem to indicate that for many farmers, an instructor may effectively reinforce a personal invitation to enroll by the use of cards, letters, and other well chosen types of publicity about his courses. It is the writer's opinion, however, that a teacher can save much time in organizing his adult farmer courses by involving committees of farmers in the process of providing "face-to-face" invitations and by choosing his publicity carefully. Teachers often use an excessive amount of time organizing adult programs because they fail to use committees of farmers and because they prepare an excessive amount of publicity. □

To Evaluate - - -

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3. What interest does the boy show in FFA activities and what is his desire to participate in district, state and national FFA work?
4. Does the boy carry on a satisfactory and expanding supervised farming program?
5. How well does the boy do on written and oral tests?
6. How does the pupil rank in the rest of the class and how does this correspond with his abilities?
7. Is the boy interested and eager to learn?
8. Is the boy of good moral character and well liked by other students?
9. Is the boy a good leader or does he just follow along with the group?
10. How does the boy's work in Vo-Ag compare with that in other subjects?

Criteria to Use in Evaluating the Ag Room and Equipment

1. Is the classroom of proper size and does it contain enough equipment to meet the needs of the largest class?
2. Does it have proper lighting, heating and ventilation?
3. Does it contain a suitable instructor's desk or table?
4. Is the classroom equipped with adequate storage space, reference material and teaching supplies?
5. Is the Ag department tied in with the rest of the school's time and bell system?
6. Is it clean and attractively decorated?
7. Is it arranged so that all students can see, hear and be seen and heard?

Criteria to Use in Evaluating the Farm Shop

1. Is the shop of proper size and does it contain the necessary equipment to meet the needs of the largest class?
2. Is it well lighted, heated and ventilated?
3. Does it have a strong, solid concrete floor with a proper drain?
4. Is the door large enough and at a proper level to permit entrance of machinery common to the area?
5. Does the shop have adequate, strong, wall and movable benches which are well lighted and conveniently located?
6. Is there provision for orderly and safe storage of tools and supplies?
7. Is the shop equipped with a blackboard, bulletin board, lockers and sink?
8. Are the power tools equipped with safety devices?

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The need for, some limitations in, and suggestions for - - -

Research in Agricultural Education

DON M. ORR, Teacher Education, Oklahoma A & M College.

Don M. Orr

MANY teacher education departments throughout the country have done valuable research work in agricultural education. However, the many problems that continue to confront workers in this field emphasize the need for further carefully planned and conducted studies in the various problem areas of agricultural education.

Perhaps a brief statement concerning generally recognized purposes of research in agricultural education may prove helpful. Research may be valuable as a means of helping to discover conditions or situations that may retard, limit, or completely block progress in agricultural education, and it may be helpful in more clearly defining problems of which we are aware. We may sense some problems and have some concept of their nature, but further investigation may bring them out in bold relief so they may be considered more completely. Through research we may expect to find ways and means of solving problems pertinent to agricultural education.

Workers in agricultural education are generally aware of the fact that dynamic forces are affecting rural people, farms, farming practices, marketing practices, schools, communities, transportation and communication. One might list many additional forces or factors but these illustrate problem areas. Fortunately, for several decades agricultural experiment stations have been making valuable contributions by solving many of the problems of agriculture, and they have contributed much to the more complete understanding of other problems. All of this work is essential to the development of adequate programs of agricultural education.

Cooperation in Research

Our co-workers in psychology, sociology, educational method, school administration, supervision, and guidance have carried on studies that are vitally important to workers in agricultural education. Agricultural education workers may need to make independent studies in these areas with emphasis on aspects of the problems peculiar to agricultural education. It may be desirable, however, to make studies in cooperation with research workers generally associated with public school education. Cooperative studies may have greater breadth and depth than independent studies in the same area.

Another aspect of our problems is techniques in research. We may be fully cognizant of problems that should be studied but fail to attack them or make only superficial progress in solving them because the investigator lacks knowledge of correct methods or procedures in securing the information needed. He may not know the best methods of organizing information secured, nor be familiar with valid techniques of analysis. Such limitations may lead to incorrect interpretations of the meaning or significance of data secured.

Need for 'Depth'

Some attempts at research are adequate in scope or breadth but lack in depth. The investigator may "get a count" on many things and report that "so many did" and "so many didn't," but have very little information on the underlying causes as to why "some did" and "some didn't."

Some research studies may help solve problems of immediate concern to a state or region. Other studies may be more concerned with recognizing and defining principles, or understanding underlying causes. This second type of study is difficult, but it is deserving of more consideration than workers in agricultural education have given it.

It is difficult to secure valid information on problems that involve human attitudes, concepts, or skills. It is also difficult to make valid interpretations of information secured on such factors. These difficulties may have caused workers in agricultural education to avoid studies in such areas as evaluation of methods in teaching or effectiveness of programs of agricultural education.

Programs Needed

Developing research programs is another problem area for workers in agricultural education to consider. What problems should be studied? Can the problem selected be best studied by one teacher training department? Should it be a state program, or would a regional research program supply more valid information?

Research in agricultural education will not play the important role that it should until we have adequate funds to finance vital studies. Apparently few states have made use of Federal funds for research studies in agricultural education.

A few of the problem areas worthy of our consideration are:

1. The influence of changes in rural population on agricultural education
   a. Influence on established departments of vocational agriculture
   b. The location of prospective departments of vocational agriculture
   c. The nature or scope of supervised farm practice
2. Adult education in agriculture
   a. Group instruction
   b. Individual instruction on the farm
3. Young farmer education
4. Agricultural education needs of part-time farmers
5. Use of school land in teaching vocational agriculture
6. Multiple teacher departments
7. Developing total programs of vocational education in agriculture
8. Guidance of high school students
9. Supervision of teachers
10. Value of professional courses required of prospective teachers
11. Pilot schools as a means of demonstrating new practices in teaching
12. Apprentice teaching
13. Evaluation of total programs of vocational education in agriculture
14. Evaluation of total educational programs planned for prospective teachers
15. In-service training of teachers. □

To Evaluate - - -

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9. Is the shop clean and maintained in an orderly manner?

In Summary

Nearly everything can be and is being constantly evaluated. We evaluate our breakfast, the movie we attend, the speech we hear, the people we meet and the things we have. The same is true in Vo-Ag work. We evaluate many little things such as the lesson we taught, the demonstration we gave, the field trip we went on, the test we gave and so many others that I won't try to give criteria to use in evaluating them all. Each teacher should and probably will evaluate each of these little things with criteria he has set up in his own mind. This is all very well, but a regular, systematic evaluation by other people is necessary to see that we as teachers don't get in a "rut" that is guiding us in the wrong direction. Stop every once in a while and evaluate your total program and all its parts to see that you are meeting the needs of the community and of the students and adults in that community. □

How Do Vo-Ag - - -

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Records Kept and Used

Although no statistically significant difference was present for the types of farm records kept in 1955 and used in planning and managing the cropping system, responses and extent of use indicated that the difference which did exist could be regarded as being a result of vocational agriculture training.

Two interactions, those for the types of farm records kept in 1955 and used in planning and managing the livestock program and also types of farm records kept in 1955 and utilized in making use of labor, machinery and power were significant at the one per cent level.

The findings reported in this study differ considerably from results of other investigations of the contributions of

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News and *Views* of the Profession

Beamer on Assignment to South America

Rufus W. Beamer

DR. Rufus W. Beamer, Associate Professor of Agricultural Education at the University of Tennessee, began a two-year leave of absence from his teacher training duties in September, 1956, to work as a vocational educationist (agriculture) with the International Cooperation Administration, Cali, Colombia, South America. As a member of the Education Division staff of the ICA in Latin America, he will work with the Secretaries of Education and Agriculture of Colombia in the organization of vocational agriculture, teacher training in vocational agriculture, evaluation and revision of curricula and texts of vocational agriculture and the establishment of normal schools for teacher training.

Dr. Beamer, a native of Virginia, earned both the B.S. and M.S. Degrees at Virginia Polytechnic Institute. He taught vocational agriculture in Virginia for seven years. The Ed.D. Degree with a major in agricultural education was awarded by The University of Illinois in February, 1956. He has been a member of the teacher training staff at The University of Tennessee since 1948. He is a member of Alpha Zeta, Phi Delta Kappa, and Kappa Delta Pi.

"Ag Ed'ers" Abroad

C. S. ANDERSON, Professor of Agricultural Education, Emeritus, The Pennsylvania State University.

"AG Ed'ers" in ever-increasing numbers are representing the United States and their profession abroad. They are playing an important role in the foreign aid program of our government, and in the far-reaching activities of foundations, such as The Near East, Ford, and Rockefeller.

UNESCO, FAO, ICA, and USIA, all have recruited personnel from our ranks. I have no way of knowing how many U. S. government awards under the provisions of the Fulbright Act and the Smith-Mundt Act have been granted to men in Agricultural Education, but I know that they have been numerous.

During the past five years, foreign duty has taken me to a number of the countries in which extensive economic aid projects are under way, and where men from Agricultural Education are employed. In all my travels I have never heard an expression of disappointment, or a 'sour' word spoken by their foreign counterparts about men recruited from Agricultural Education.

It has been said that these overseas posts go largely to men who have retired from the profession, sort of a lush bluegrass pasture for overaged horses. This is far from the truth. Most of the "Ag Ed'ers" abroad are comparatively young men, and that is as it should be, for the work is strenuous and frequently very demanding. Some have been motivated by the opportunity to gather research data for a dissertation. Some are just plain adventurers. It is safe to say that all are working harder than if they had remained in their jobs at home, and that they are meeting a real challenge in helping the people of under-privileged countries solve their problems in Education and in Agriculture.

Two young men who are presently with me in a Stanford University-sponsored ICA project in the Philippines are good examples of "Ag Ed'ers" abroad.

Wilbur P. Ball

Wilbur P. Ball, B.S., Colorado State College '48, M.S., Colorado State College '52, and Ph.D., Iowa State College '56, joined our Stanford faculty in September, 1956. He is serving as a consultant in methods of teaching Farm Shop. His background of farm experience, successful Vocational Agriculture teaching and his intense interest in the problems of foreign people qualifies him as a natural for his present duties.

Gene M. Love

Gene M. Love is on the overseas Stanford staff as a consultant in Agronomy. He comes from Tennessee. He holds three Agricultural Education degrees from Pennsylvania State University, B.S., '49, M.S., '53 and Ph.D., '55. Love distinguished himself as a teacher of Vocational Agriculture in Lancaster Co., Pennsylvania. In 1952 he won a Coke Oven Ammonia Research Fellowship which provided for his graduate study with emphasis on the teaching of Agronomy.

Both Dr. Ball and Dr. Love will be returning to the United States and to their profession following this foreign assignment with a rich experience in working with the people of an underprivileged land.

Agricultural Education administrators, college professors, and classroom teachers should seize the first opportunity they have for an overseas assignment. We need to see beyond our limited horizons. We need to have the rewarding experience of helping to raise the standard of living and the economic status of less fortunate people. Those who have this experience will return to their American positions and classrooms with a sense of personal pride in their accomplishments, and will be an asset to those schools fortunate enough to count them on their faculties.

Foreign Assignment for Ross

Henry Ross

PROFESSOR Henry Ross of the Texas A. & M. Department of Agricultural Education and Mrs. Ross left in January for East Pakistan where he will serve for two years as a consultant in agriculture and improvement of teaching at the University of Dacca.

His work is a part of an agreement between the Texas A. & M. College System and the government of Pakistan.

Ross has completed 22 years with Texas A. & M. and has a total of 33 years in the field of agricultural education. He taught vocational agriculture in high schools for twelve years. He is co-author of two books and has published several bulletins.

Ross holds a lifetime membership in the Texas State Teachers' Association and the American Vocational Association. For 10 years he has served as secretary of the TVA. Until recently he served as business manager of the *Agricultural Education Magazine*, a national magazine serving the program of vocational agriculture.

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high school vocational agriculture to establishment of graduates in farming. Probably some of the practices for which differences between vocational agriculture graduates and non-vocational agriculture graduates had been previously indicated have become either generally well-accepted or have been superseded by newer recommendations.

This investigator was unable to locate reports of other studies concerning the use of farm records in various areas of management and production by graduates. Because of the highly significant differences indicated between the groups in their responses to questions concerning uses made of farm records, there appears to be a possibility that many of the other reported differences may have been influenced to a greater extent than had been previously suspected by management decisions based on farm records. □

Deadline Dates—June 15—Final date for payment of National FFA membership dues.

June 30—Applications for American Farmer degree due in National Office bearing postmark no later than June 15.

APPROVED PRACTICES IN FARM MANAGEMENT by Hall and Mortenson, illustrated, pp. 228, published by The Interstate, Danville, Illinois. Price, $2.00.

This is the latest in a growing series of "approved practices" books. It contains chapters on: Beyond the Farm Gate; Father and Son Agreements; Water Management and Soil Conservation; Crop Production; Livestock; Management Practices with Hogs, Beef, and Dairy; Range Management; Field, Farmstead, and Building Arrangements; Planning the Farm Business; Combining Success Factors for a Profitable Farm Business; Farm Records.

It is fairly obvious that not all of the "decision making" part of farming can be condensed satisfactorily into one small book. Much must be left out in order to present a complete picture as is the case with this book. However, this book should interest teachers greatly because of certain chapters which present information in areas in which good resource materials are difficult to find. The book is well written and well illustrated. Both high school and young farmer groups should enjoy using it.

I. F. Hall and W. P. Mortenson are both in the Department of Agricultural Economics, College of Agriculture, University of Wisconsin.

—A.H.K.

FARM POULTRY PRODUCTION by Wilson and Card, illustrated, pp. 301, published by The Interstate, Danville, Illinois. Price, $4.00.

Farm Poultry Production contains chapters on: The Business of Poultry Keeping; Culling and Selection for Egg Production; Selecting the Breeder Stock; Feeding Hens; Housing Farm Poultry; Maintaining a Healthy Flock; Vaccinating Poultry; Hatching and Raising Chicks; Increasing Returns by Better Marketing; Improving the Flock by Breeding.

This is a book written in non-technical terms for those who want an easily read practical book on poultry production. Well selected illustrations are used to highlight important points and supply additional information. Teachers of vocational agriculture should find this to be a useful reference.

Norris E. Wilson is a member of the Poultry Department, University of California. Leslie E. Card is Professor of Animal Science, University of Illinois.

—A.H.K.

A MORE EFFECTIVE FFA by Stanley Wall, illustrated, pp. 200, published by The Interstate, Danville, Illinois. Price, $2.95.

The chapters included in this publication are: Leadership—a Cornerstone of the FFA; Developing Leadership Abilities; The FFA in the Program of Vocational Agriculture; The Chapter Officers; Election of Officers; The President; The Vice-president; The Secretary; The Treasurer; The Reporter; The Sentinel; Setting Up and Carrying Out a Program of Activities; Financing Chapter Activities; Holding FFA Meetings; Keeping the Public Informed; Using Simple Parliamentary Rules; FFA Banquets; Using Degree Ceremonies.

Much of what has been included in this publication is needed in just this form for use by FFA members. Teachers will also find it a handy reference book. The book is well written and so organized that it will be useful for group study as well as for use as a reference by Chapter officers. Emphasis is mainly on officer duties and activities rather than on regular member activities and responsibilities. Many good illustrations are used throughout to stimulate the youthful reader.

Stanley Wall is Associate Professor in Agricultural Education, University of Kentucky.

—A.H.K.

DISEASES OF FIELD CROPS, second edition, by James G. Dickson, illustrated, pp. 517, published by McGraw-Hill, New York. Price, $8.50.

This is one of the many McGraw-Hill publications in the Agricultural Sciences. It is written in four sections as follows: General Introduction; Diseases of Cereals and Grasses; Diseases of Legumes; Diseases of Fiber and Other Field Crops. The discussion of each disease emphasizes identification and control—including problems of crop rotation, adaptation, and resistant varieties.

This is basically a college text. It should be of great value to teachers of vocational agriculture as a special reference for the high school classes and as a reference for use with young farmer and adult farmer groups. The book is very well written and illustrated. Many references are listed for those who would study further about the diseases included in the book.

The author, James G. Dickson, is Professor of Plant Pathology, University of Wisconsin and Agent, Section of Cereal Crops, Division of Field Crops, Agricultural Research Service, U.S.D.A.

—A.H.K.

HANDBOOK ON TEACHING VOCATIONAL AGRICULTURE, sixth edition, by Phipps and Cook, illustrated, pp. 964, published by The Interstate, Danville, Illinois.

This is the sixth edition of a book familiar to most workers in the field of agricultural education. This new edition was made necessary by many changes in techniques and procedure used in organizing and conducting programs of vocational education in agriculture for local communities.

Some of the new topics included in this revision are: abilities needed by a teacher of vocational agriculture; planning a program of vocational agriculture; techniques of determining needs in a community; developing objectives for a community program of agricultural education; teacher-student planning; instruction on-the-farm; course planning; teaching desirable behavior; a philosophy of adult farmer education; local young farmer organization constitution and by-laws; counseling techniques; school land management; using audio-visual aids; organizing multiple teacher departments; and organizing the time of a teacher.

The value of this book to teachers of vocational agriculture, teacher trainers, and supervisors is quite evident. Others who are concerned with the planning, conduct, or administration of vocational agriculture programs would also find the book of value.

Lloyd J. Phipps is Associate Professor of Agricultural Education, University of Illinois. Previous editions were by the late Glen Cook, Agricultural Education, Michigan State College.

—A.H.K.

GROWING FIELD CROPS by Dungan and Ross, illustrated, pp. 495, published by McGraw-Hill, New York. Price, $4.96.

Growing Field Crops is one of the McGraw-Hill "Rural Activity" series. It is organized on the basis of the jobs which crop growers must perform. This organization lends itself well to the use of the book in teaching vocational agriculture. The book is well written and well illustrated. A correlated list of visual aids is included in the appendix.

The following chapters are included in the publication: Choosing Crops to Grow; Selecting Varieties of Field Crops; Providing Good Seed; Treating Seed for Planting; Preparing the Soil for Field Crops; Planting Seed and Setting Small Plants; Aiding Young Plants to Get Established; Cultivating and Stimulating Growth; Controlling and Eradicating Weeds; Controlling Harmful Field-Crop Insects; Preventing and Controlling Diseases; Harvesting Field Crops; Storing Field Crops; Marketing Field-Crop Products; Breeding and Improving Field-Crop Plants; Keeping and Using Field-Crop Records.

This book was written for use by teachers of vocational agriculture and should prove very useful.

George H. Dungan is Professor Emeritus of the University of Illinois. W. A. Ross is Consulting Editor of the McGraw-Hill Rural Activity Series.

—A.H.K.

SHOP GUIDE IN FARM MECHANICS by David Hartzog, illustrated, pp. 138, published by The Interstate, Danville, Illinois. Price, $2.95.

This shop guide manual contains a series of detailed instructions for performing typical jobs encountered in forge work, welding, drilling and tapping, soldering and sheet metal, pipe work, tool grinding, and lathe work. It is a spiral bound, 8½ x 11 publication designed to help teachers with the teaching of metal work skills.

—A.H.K.

Stories In Pictures

One of the greatest assets to a Vo-Ag department is an active, functioning advisory council which meets regularly and has business to attend to. Shown here is the advisory council of the Sargent, Colorado, department assisting the teacher in arriving at decisions regarding the program of Vo-Ag and its operation.
(Picture furnished by Wm. Paul Gray)

Harold Evans, Jr., member of Lord Baltimore (Maryland) Chapter Future Farmers of America, lettering skid type gasoline storage tanks. Forty-one tanks were lettered by members during the fire season last spring and eight additional tanks were placed underground from efforts of Chapter members.
(Picture furnished by Raymond L. Swadley)

Holding pen, cattle squeeze chute, and loading chute are properly constructed on Mississippi FFA 1440-acre farm to be used as a demonstration with FFA members and adult farmers. (Mississippi Vo-Ag Education Department Photo)

A Young Farmer from the Hakalau Chapter, Hawaii Young Farmers Association, is receiving on-farm instruction on growing Vanda orchids from his teacher and the area supervisor.

Jack Gifford, 1955 Mississippi Star Farmer, puts into practice mechanical jobs learned by repairing and adjusting his gas hot water heater. (Mississippi Vo-Ag Education Department Photo)

What can the wives do while the Young Farmers are attending their meetings. The LaCrosse, Virginia, Young Farmers get help with this problem from the Home Ec. teacher who is meeting with the wives while their husbands are in session with the Vo-Ag Teacher. On some occasions the FHA girls from the Home Ec. department take care of the children in a separate room.